TWO NEW PALEARCTIC SPECIES OF *SESIOPLEX* VIERECK (HYMENOPTERA : ICHNEUMONIDAE) INCLUDING PHYLOGENY, ZOOGEOGRAPHY AND A KEY TO THE WORLD SPECIES

P. M. Sanborne

Department of Biology, McMaster University
Hamilton, Ontario, L8S 4K1

Abstract

Two new Palearctic species of *Sesioplex* Viereck (Hym.: Ichneumonidae), *brunipalpus*, n. sp., and *cribus*, n. sp., are described and illustrated. Two Palearctic species, *cerophagus* (Grav.), and *punctulatus* Horstmann, are removed from *Sesioplex* and placed in *Campoplex* [*C. cerophagus* Grav., *C. punctulatus* (Horst.), n. comb.]. Reasons for this are given. The generic limits of *Sesioplex* are redefined, a key to the world species is provided, and its phylogeny and zoogeography are discussed.

INTRODUCTION

I recently revised the North American species of *Sesioplex* Viereck (Hymenoptera: Ichneumonidae) (Sanborne 1981). The primary diagnostic character of the genus is a slender ovipositor (its depth at midlength distinctly less than width of hind basitarsus) which bears a pronounced nodus immediately in front of the dorsal notch. I have since discovered 2 Palearctic species which possess identical ovipositors and agree in other characters as well (see discussion following phylogeny and generic description). These species, *brunipalpus*, n. sp., and *cribus*, n. sp. are placed in *Sesioplex*, described and illustrated. The genus is redefined, its phylogeny and zoogeography are discussed, and a key to the world species is provided.

Horstmann (1977) placed 2 European species, *cerophagus* (Grav.) and *punctulatus* Horst., in *Sesioplex* and these were re-examined. They clearly do not agree with *Sesioplex* (sensu Viereck). In my opinion, both belong in *Campoplex* (sensu lato) and therefore, *cerophagus* (Grav.) is reinstated in *Campoplex* (i.e., *C. cerophagus* Grav.) and *punctulatus* Horst. is placed in *Campoplex* as a new combination [i.e., *C. punctulatus* (Horst.) **n. comb.**] (see discussion following generic description).

MATERIALS AND METHODS

Only the holotypes of *cribus*, n. sp. and *brunipalpus*, n. sp. are available for study. They were sent to Dr. Klaus Horstmann (Zoologisches Insitut, Wurzburg), an authority on Palearctic Porizontinae (= Campopleginae), to establish whether or not the species had previously been described and placed in other genera, and to try and locate additional material. He advised me (personal communication, 1982) that both species were unfamiliar to him. Their distinctiveness, and the need to provide additional evidence in support of maintaining separate generic status for *Sesioplex*, prompted me to describe the species at this time. Other material examined includes the lectotype of *Omorgus picticrus* Thomson [= *Sesioplex cerophagus* (Gravenhorst)] and the holotype of *Sesioplex punctulatus* Horstmann. The lectotype of *Campoplex cerophagus* Grav. is housed in Breslau (Wroclaw), Poland and was unavailable.

Terminology: The terminology used in this paper is that of Townes (1969) except that 'gena' is used instead of 'cheek'.

Measurements: Some of these are described in my earlier paper (Sanborne 1981). Additional measurements are made in the following manner. The length of the areola is measured thorugh its middle from the apical margin of the basal area to a line defined by the junction of the median longitudinal carinae with the basal transverse carina. The length of the petiolar area is measured from this line, medially through the propodeal trough, to the articulating membrane at the junction of the propodeum and abdomen. The width of the areola is measured between the median longitudinal carinae at their junction with the basal transverse carina. The width and height of the petiole of the lst abd. segment are measured at the midlength of the petiole. The length of the petiole is measured, in lateral view, between the posterior margin of the articulating membrane and the midpoint of the spiracle. The postpetiole length is measured, in the same view, from the midpoint of the spiracle to the middle of the apical margin of the postpetiole. The width of the postpetiole is measured at its widest point. The length of the hind tarsal claw is measured, in dorsal view, from the base to the apex and does not account for curvature of the claw. The empodium comprises a sclerotized basal portion and a membranous apical portion. The apical margin of the sclerotized base is indented medially so that there are 2 short lateral projections. The length of the empodium is measured from the basal margin to the apical margins of the lateral projections. The length of the ovipositor is measured relative to the lengths of the hind femur and the thorax. For convenience, the length of the thorax is measured, in lateral view, from the anterior (closest to head) margin of the tegula to the apex of the propodeum. The thorax appears to remainunmodified in spite of variation between species in the length and depth of the hind femur and ovipositor. This becomes useful in resolving situations where, for example, 2 species, one with a short hind femur and short ovipositor, the other with a long hind femur and long ovipositor, give approx. the same length : length ratios. It is possible to get different ratios when their ovipositors are measured relative to the length of the thorax. I have found examples of this in current studies of the related genus *Sinophorus*. The tip of the dorsal valve of the ovipositor consists of the portion from, but not including, the dorsal notch to the apex of the valve and is measured, in lateral view, along the dorsal surface (exclusive of claw) from the apical margin to the point where the segment begins to constrict near the point of articulation with the 4th segment.

Illustrations: All drawings were made with the aid of a camera lucida attached to a Wild M5 dissecting microscope.

PHYLOGENY

The genus *Sesioplex* is considered a monophyletic group based on the structure of the ovipositor which is very slender and possesses a pronounced nodus in front of the dorsal notch. In addition, the suture separating the tergite from the sternite of the petiolar segment of the abdomen is distinctly below the midheight of the petiole. The genus appears to be closely allied to *Sinophorus* and also appears to have affinities to *Campoplex* (see discussion following generic description).

The North American species (*depressus* Viereck, *californicus* Sanborne) appear to be more closely related to each other than to either *brunipalpus*, n. sp. or *cribus*, n. sp. from the Palearctic region. Both North American species have a more or less spherical head with a broad face, perpendicular 2nd recurrent vein in the fore wing, hind femur approx. 3.8 - 4.0 x as long as deep, and a straight ovipositor which is approx. 2.0 x as long as the hind femur. They differ strongly in the structure of the mandible, petiole of the 1st abd. seg. and color as described in my 1981 paper. I consider them to belong to the same species-group but do not consider them as sister-species.

Conversely, *brunipalpus*, n. sp. and *cribus*, n. sp. appear to be more closely related to each other than to either of the North American species. Nevertheless, the species are very distinct from one another and are not considered to be sister-species and may not even belong to the same species-group. This may become clearer when the extent of intraspecific variation is known. The lower margins of the cmpd. eyes are weakly convergent in *brunipalpus*, n. sp., but weakly divergent in *cribus*, n. sp. (Figs. 1, 9). There are strong differences in the punctation, wrinkling and depth of the propodeal trough (Figs. 3, 12). The petiole of *cribus*, n. sp. is distinctly wider than deep (Figs. 11, 13) while that of *brunipalpus*, n. sp. is approx. as wide as deep (Figs. 4, 5). Features common to both species include a more or less triangular head (Figs. 1, 9), sloping 2nd recurrent vein in the fore wing, hind femora of similar shape and dimensions (approx. 4.1 - 4.3 x as long as deep) and petiole with a short baso-lateral groove (more pronounced in *cribus*, n. sp.). The first three character states may represent the plesiomorphic condition and, as such, cannot be used to establish a sister relationship.

In my opinion, *brunipalpus*, n. sp. is the most generalized of the 4 species discussed. Based on out-group comparisons with the apparently related *Sinophorus* and *Campoplex*, the following character states are postulated to be plesiomorphic: eye margins moderately notched opposite antennal sockets; lower margins of cmpd. eyes weakly convergent; head more or less triangular in frontal view; temples, in dorsal view, moderately sloping inwardly; propodeal trough moderately excavated, with transverse wrinkling on the petiolar area; hind femur 4.1 - 4.3 x as long as deep; front wing with 2nd recurrent vein moderately sloping (approx. 20 - 30 degrees from vertical); hind wing with nervellus intercepted near basal 0.2 by discoidella; ovipositor curved upward (to what degree, i.e., weakly mod., strongly, is plesiomorphic has not been determined). The following color character states are postulated to be plesiomorphic: head, thorax, and abdomen entirely black (exclusive of mandibles, palpi, tegula and abdominal sternum); hind tibia with distinct sub-basal and apical dark bands, and median band white externally.

ZOOGEOGRAPHY

In my 1981 paper I suggested that the discovery of additional species might shed light on the probable center of origin and pattern of speciation within *Sesioplex*. The latter cannot be determined because of the apparent lack of sister-pairs within the group. With regards to center or origin, I follow the school of thought which says that the more primitive extant members of a group will usually be found nearer to the area occupied by its ancestors than the more derived members (in Pielou 1979, Wiley 1981). If this is correct and *brunipalpus*, n. sp. is the most primitive extant member of *Sesioplex*, then, the genus has its center of origin in the Palearctic region. A more precise location awaits the determination of the center of concentration of *brunipalpus*, n. sp. or the discovery of an even more primitive species.

Genus **SESIOPLEX** Viereck

Campoplex subg. *Sesioplex* Viereck, 1912. Proc. U.S. Natl. Mus. 42: 644.

Type-species: *Campoplex (Sesioplex) depressus* Viereck. Orig. desig.

Head, in frontal view, broadly triangular to spherical; approx. 1.9 - 2.5 as wide as combined height of face and clypeus. Compound eyes with margins weakly to moderately notched opposite antennal sockets, weakly divergent to weakly convergent below. Temples, in dorsal view, moderately sloping inwardly; in lateral view, approx. 0.8 as long as cmpd. eyes. Gena approx. 1.1 - 1.4 as long as basal width of mandible (measured to lower margin of mandible). Genal carina joining oral carina at or above base of mandible. Thorax with mesopleural suture impressed as a sharp groove. Propodeum with areola and petiolar area completely confluent and forming a mod. broad to broad, weakly to moderately excavated trough. First, 2nd, 3rd lateral areas usually completely enclosed by carinae (costula often obsolete around lateral border of 1st lateral area). Areola approx. 0.7 - 0.9 as wide and 0.3 as long as petiolar area and approx. 0.4 as wide as distance between propodeal spiracles. Front wing approx. 3.8 - 7.8 mm; areolet present; 2nd recurrent vein mod. sloping to perpendicular. Hind wing with nervellus not intercepted or intercepted near basal 0.2 by discoidella which is in the form of a faint furrow. Discoidella strongly arching in front of midlength. Hind femur approx. 3.8 - 4.3 as long as deep. Hind tarsal claw with 5 - 7 pectins which do or do not extend to base of tip. First abd. tergite with or without a lateral longitudinal groove. Suture separating 1st abd. tergite from sternite approx. 0.4 - 0.7 below midheight of petiole. Petiole as wide as or wider than deep. Apex of male clasper rounded. Ovipositor approx. 2.0 - 2.4 as long as hind femur, with a pronounced nodus immediately in front of dorsal notch, weakly upcurved to straight, its depth at midlength distinctly less than width of hind basitarsus. Tip of dorsal valve of ovipositor approx. 0.8 - 1.1 as long as 5th hind tarsal segment (exclusive of claw).

Discussion: In my 1981 paper I stated that *Sesioplex* appears to be closely allied with *Sinophorus* with affinities to *Campoplex*. This view has not changed but the discovery of 2 new Palearctic species of *Sesioplex* and the results of current studies of *Sinophorus* make it necessary to modify and expand some of the statements made in that paper.

The North American species of *Sesioplex (depressus* Viereck, *californicus* Sanborne) possess a perpendicular 2nd recurrent vein in the fore wing which I initially treated as a diagnostic feature of the genus. The Palearctic species of *Sesioplex (brunipalpus*, n. sp., *cribus*, n. sp.) have the 2nd recurrent vein weakly to moderately sloping respectively, as in the majority of *Sinophorus*. The majority of *Campoplex* have the 2nd recurrent vein strongly sloping (30 - 35 deg. from vertical). The hind wings of *Sesioplex* and *Sinophorus* have the discoidella moderately to strongly arching in front of the midlength (toward wing base) but the majority of *Campoplex* have the discoidella straight or weakly arching and positioned closer to the lower margin of the wing. This is the most consistent character that I have found for separating *Sinophorus* and *Sesioplex* from *Campoplex*. However, it is not 100% efficient as there are a few species of *Campoplex* which have the discoidella moderately to strongly arching. The areolet in the fore wings of *Sinophorus* and *Sesioplex* is large (except one undescribed species of *Sinophorus* and a few specimens of *Sesioplex depressus*). The areolet of *Campoplex* is commonly small but there is overlapping with *Sinophorus* and *Sesioplex*.

The propodeal trough of *Sesioplex* is very similar to that of *Sinophorus* with regards to the degree of excavation and width of the areola. In *Sesioplex* and approx. 95% of *Sinophorus*, the areola is approx. 0.4 x as wide as the distance between the propodeal spiracles, while in the majority of *Campoplex* it is only 0.3 x as wide.

The genus *Sesioplex* differs from all *Sinophorus* and *Campoplex* in the possession of a pronounced nodus immediately in front of the dorsal notch of the ovipositor. The length of the ovipositor is an artificial but, nevertheless, useful character in separating *Sinophorus* and *Sesioplex* from most *Campoplex*. It rarely exceeds 2.5 x the length of the hind femur in *Sinophorus*, whereas, it almost always does so in *Campoplex* (often greatly). In *Sesioplex* it varies from approx. 2.0 - 2.4 x the length of the hind femur. The depth of the ovipositor is another useful character. In *Sinophorus*, its depth at midlength is rarely less than the width of the hind basitarsus, almost always less than in *Campoplex* and, with present knowledge, always less than in *Sesioplex*. The length of the tip of the dorsal valve in *Sinophorus* ranges from 1.0 - 2.0 x the length of the 5th seg. of the hind tarsus (exclusive of claw) (usually about 1.3). It ranges from 0.5 - 1.0 x in *Campoplex*, with most species around 0.8 x. This character is intermediate in *Sesioplex* and ranges from 0.8 - 1.1 x the length of the 5th seg.

The 2 species placed in *Sesioplex* by Horstmann (1977), *cerophagus* (Grav.), *punctulatus* Horst., are removed from the genus for the following reasons: both species lack a pronounced nodus in front of the dorsal notch of the ovipositor; areola of both species approx. 0.3 x as wide as distance between propodeal spiracles (as in *Campoplex*); discoidella weakly arched in *cerophagus*, mod. arched in *punctulatus* (within range of *Campoplex*); tip of dorsal valve of ovip. as long as 5th seg. of hind tarsus in *cerophagus*, approx. 0.7 x as long in *punctulatus* (as in *Campoplex*); clypeus small, strongly convex in *cerophagus* (common in *Campoplex*, not found in *Sesioplex*, very rare in *Sinophorus*). On the basis of these characteristics, *cerophagus* is reinstated in *Campoplex* (i.e., *C. cerophagus* Grav.) and *punctulatus* is placed in *Campoplex* as a new combination [i.e., *C. punctulatus* (Horst.), n. comb.]

ARTIFICIAL KEY TO THE WORLD SPECIES OF SESIOPLEX

1 Abdominal tergites 1 - 6 partially to entirely ferruginous. Mandible with upper tooth longer than lower tooth. First abdominal segment with a distinct lateral longitudinal groove along the entire length of petiole. Eastern United States and Canada . . . . **depressus** Viereck

Abdominal tergites entirely black. Mandible with upper tooth longer or shorter than lower tooth. First abdominal tergite without a lateral longitudinal groove or with short baso-lateral groove 2

2 Mandible with upper tooth shorter than lower tooth. First abdominal tergite without a lateral groove. Ovipositor approx. 2.0 as long as hind femur. California . . . . **californicus** Sanborne
Mandible with upper tooth slightly to distinctly longer than lower tooth. First abdominal tergite with short baso-lateral groove. Ovipositor approx. 2.2 - 2.4 x as long as hind femur. Palearctic region . . . 3

3 Mandible with upper tooth distinctly longer than lower tooth. Ovipositor approx. 2.2 x as long as hind femur. Propodeal trough moderately excavated, few distinct punctures evident and with distinct transverse wrinkling on petiolar area . . . . **brunipalpus**, n. sp.
Mandible with upper tooth slightly longer than lower tooth. Ovipositor approx. 2.4 x as long as hind femur. Propodeal trough shallow, with dense punctures over entire surface and irregular, longitudinal wrinkles on petiolar area . . . . **cribus**, n. sp.

1. **Sesioplex brunipalpus**, n. sp. (Figs. 1-8)

Diagnosis: Head approx. 2.0 as wide as height of face and clypeus. Mandible with upper tooth distinctly longer than lower tooth. Mesopleuron with moderate size punctures (approx. .002 mm) on lower 0.5 which are separated by distance approx. equal to dia. of single puncture. Hind tarsal claw with pectins which extend to base of tip. First abd. tergite with petiole as wide as deep. Ovipositor approx. 2.2 as long as hind femur, weakly upcurved. Hind wing with nervellus weakly intercepted near basal 0.2 by discoidella which is in form of faint furrow. Hind tibia with distinct sub-basal, apical dark bands.

Holotype female: Head approx. 2.0 as wide as height of face and clypeus combined, triangular in frontal view. Compound eyes with margins mod. notched opposite antennal sockets, weakly convergent below. Antennal flagellum with 35 - 40 articles (estimated, tips broken). Face strongly shagreened, matte, mod. rugose medially, with large punctures which are separated by distance less than dia. of single puncture. Clypeus strongly shagreened, matte, with numerous punctures; distinctly separated from face by broad shallow impression; mod. convex, with antero-median field flattened; anterior margin mod. convex, broadly, weakly produced medially. Anterior 0.4 of clypeus produced below lower margin of cmpd. eye. Mandible with upper tooth distinctly longer than lower tooth. Gena approx. 1.1 as long as basal width of mandible. Temple, in lateral view, approx. 0.8 as long as cmpd. eye; in dorsal view, mod. sloping inwardly. Mesopleuron with coarse wrinkling anterior to speculum which does not extend to mesopleural fovea. Specullum with numerous punctures dorsally. Mesopleural fovea deeply impressed, elongate-oval. Lower 0.5 of mesopleuron mod. shagreened, weakly polished, with med. size punctures (approx. .002 mm) which are separated by distance approx. equal to dia. of single puncture. Propodeum with basal transverse carina mod. strong, forming 3-sided border around areola (median length approx. 0.5 as long as lateral length). Costula as strong as basal transverse carina along border with 2nd lateral area but absent along lateral border of lst lateral area. Median longitudinal carina weak, highly irregular near and not distinctly joining basal transverse carina; mod. strong, more or less straight medially. Lateral longitudinal carina highly irregular, indistinct. First lateral area sparsely punctate. Propodeal trough mod. excavated. Areola moderately shagreened, polished, with several distinct punctures and traces of transverse wrinkling apically; approx. 0.9 as wide and 0.3 as long as petiolar area and 0.4 as wide as distance between propodeal spiracles. Petiolar area with approx. 15 mod. coarse transverse wrinkles. Hind femur approx. 4.3 as long as deep. Hind tarsal claw approx. 1.7 as long as empodium (estimated from middle claw, hind claws lost) with 5 - 6 strong, mod. inclined pectins which extend to base of tip. First abd. tergite a small baso-lateral groove, the sides of the tergite otherwise weakly, irregularly rugose. Suture separating 1st abd. tergite from sternite approx. 0.4 below mid-height of petiole. Petiole as wide as deep and approx. 1.1 as long as post-petiole. Postpetiole approx. 3.6 as wide as petiole, with mod. dense dorsal pubescence. Ovipositor approx. 2.2 as long as hind femur and 1.8 as long as thorax, weakly upcurved, its depth weakly increasing from base to tip, its depth at midlength distinctly less than width of hind basitarsus. Dorsal valve of ovipositor with a pronounced nodus immediately in front of dorsal notch. Tip of dorsal valve approx. as long as 5th seg. of hind tarsus (exclusive of claw). Front wing approx. 6.1 mm, with 2nd recurrent vein mod. sloping. Hind wing with nervellus straight, erect, weakly intercepted near basal 0.2 by discoidella which is in form of weak furrow.

Color: Head, base, apex of mandible, thorax, abdomen, coxae, basal seg. of foretrochanter, entire mid, hind trochanters (except apical margins), sub-basal, apical bands of hind tibia, apical 0.6 of hind basitarsus, black. Median area of mandible yellowish. Maxillary palpus with apical 4 segments fulvo-ferruginous, basal seg. brown. Labial palpus brown. Tegula yellowish-white. Apex of basal seg. and entire apical seg. of foretrochanter, apical margins of mid, hind trochanters, femora, internal surfaces of all tibiae (except extreme bases which are whitish), sub-basal, apical patches (external) of midtibia, ferruginous. External surface of foretibia, externo-median surfaces of mid, hind tibiae, basal 0.4 of hind basitarsus whitish.

Male: Unknown.

Holotype: Female, USSR. Kurovsk region, near Ramensk, 24. VIII. 1962, Kameisova. Deposited in the Academy of Sciences, Leningrad.

Etymology: The species is named for the brown labial palpus.

Host and Biology: The holotype was taken on sugar beet. The host may be *Loxostege sticticalis* (Linn.) (Pyralidae), a common pest of this plant.

2. **Sesioplex cribus**, n. sp. (Figs. 9 - 16)

Diagnosis: Head approx. 1.9 as wide as height of face and clypeus combined. Mandible with upper tooth slightly longer than lower tooth. Lower 0.5 of mesopleuron with large punctures (approx. .004 mm) which are separated by distance approx. equal to dia. of single puncture. Propodeal trough broad, shallow, with entire surface densely punctate. Hind tarsal claw with pectins distributed along basal 0.5. First abd. tergite with petiole approx. 1.5 as wide as deep. Ovipositor approx. 2.4 as long as hind femur. Hind wing with nervellus not intercepted by discoidella. Hind tibia with sub-basal band indistinct.

Holotype female: Head approx. 1.9 as wide as face and clypeus combined, broadly triangular in frontal view. Compound eyes with margins weakly notched opposite antennal sockets, weakly divergent below. Face strongly shagreened, matte, mod. rugose, with large punctures (approx. .004 mm) which are separated by distance less than dia. of single puncture. Clypeus strongly shagreened, matte, with numerous punctures; distinctly separated from face by broad, shallow impression; moderately, evenly convex, with anterior margin mod. convex and not produced medially. Anterior 0.4 of clypeus produced below lower margin of compound eye. Mandible with upper tooth slightly longer than lower tooth. Gena approx. 1.2 as long as basal width of mandible. Temple, in lateral veiw, approx. 0.8 as long as cmpd. eye; in dorsal view, moderately sloping inwardly. Mesopleuron with mod. coarse wrinkling anterior to speculum which nearly reaches mesopleural fovea. Speculum with numerous punctures dorsally. Mesopleural fovea deeply impressed, elongate, irregular. Lower 0.5 of mesopleuron with large punctures (approx. .004 mm) which are separated by distance less than dia. of single puncture. Propodeum with basal transverse carina moderately strong, forming rounded, V-shaped border around areola. Costula as strong as basal transverse carina along border of 2nd lateral area, absent along lateral border of 1st lateral area. Median longitudinal carina indistinct near junction with basal transverse carina, mod. strong, weakly arching medially. Lateral longitudinal carina weak, highly irregular. First lateral area densely punctate. Propodeal trough broad, shallow, with entire surface densely punctate, the punctures large. Areola approx. 0.8 as wide, 0.3 as long as petiolar area and 0.4 as wide as the distance between the propodeal spiracles. Hind femur approx. 4.1 as long as deep. Hind tarsal claw approx. 1.5 as long as empodium, with 6 mod. strong, mod. inclined pectins which extend along basal 0.5 of claw. First abd. tergite with a short, basolateral groove. Suture separating 1st abd. tergite from sternite approx 0.5 below midheight of petiole. Petiole approx. 1.5 as wide as deep, 1.4 as long as postpetiole. Postpetiole approx. 3.1 as wide as petiole, with mod. dense dorsal pubescence. Ovipositor approx. 2.4 as long as hind femur, 1.9 as long as thorax, straight, weakly increasing in depth from base to tip; depth at midlength slightly less than width of hind basitarsus. Dorsal valve with a pronounced nodus in front of dorsal notch. Tip of dorsal valve approx. 1.1 as long as 5th seg. of hind tarsus. Front wing approx. 7.8 mm, with 2nd recurrent vein weakly sloping.

Color : Head, base, apex of mandible, thorax, abdomen, coxae, hind trochanter (except apical margins) black. Median area of mandible ferruginous. Tegula, extreme bases of tibiae, external surface of foretibia, external surface of midtibia (except apex), externo-median surface of hind tibia, basal 0.4 of hind basitarsus, whitish. Maxillary palpus with apical 4 segments, labial palpus with apical segment, fore, middle trochanters (except ventral surfaces of basal segments which are infuscated), apical 0.5 of apical seg. of hind trochanter, femora, internal surfaces of all tibiae (except bases and apex of hind), apex of midtibia (externally), ferruginous. Hind tibia with weak sub-basal ferruginous band, distinct apical brown band. Hind basitarsus with apical 0.6 brown.

Male : Unknown.

Holotype : Female, USSR. Volgograd, Sarepta, coll., Bekker, date? Deposited in Academy of Sciences, Leningrad.

Etymology : The species is named from the Latin noun 'cribum' meaning seive, in reference to the densely punctate propodeal trough.

Host and Biology: Unknown.

ACKNOWLEDGMENTS

I thank Dr. D. R. Kasparyan (Academy of Sciences, Leningrad) for the loan of the holotypes of *brunipalpus* and *cribus*. I also thank Mr. Roy Danielsson (Museum of Zoology and Entomology, Lund) for the loan of the lectotype of *Omorgus picticrus* Thom. and Mr. Erich Diller (Zoologische Staatssammlung, Muenchen) for the loan of the holotype of *Sesioplex punctulatus* Horst. Dr. Klaus Horstmann graciously examined the holotypes of *brunipalpus* and *cribus* before the manuscript was submitted for publication to be certain that they had not previously been described and placed in other genera. Special thanks are given to Dr. D. M. Davies (Biology Dept., McMaster Univ.) for his financial support of this study (NSERC operating grant).

REFERENCES

Horstmann, K. 1977. Bemerkungen zur Systematik einiger Gattungen der Campopleginae, II, (Hymenoptera: Ichneumonidae). Mitt. Münch. Ent. Ges. 67: 65-83.

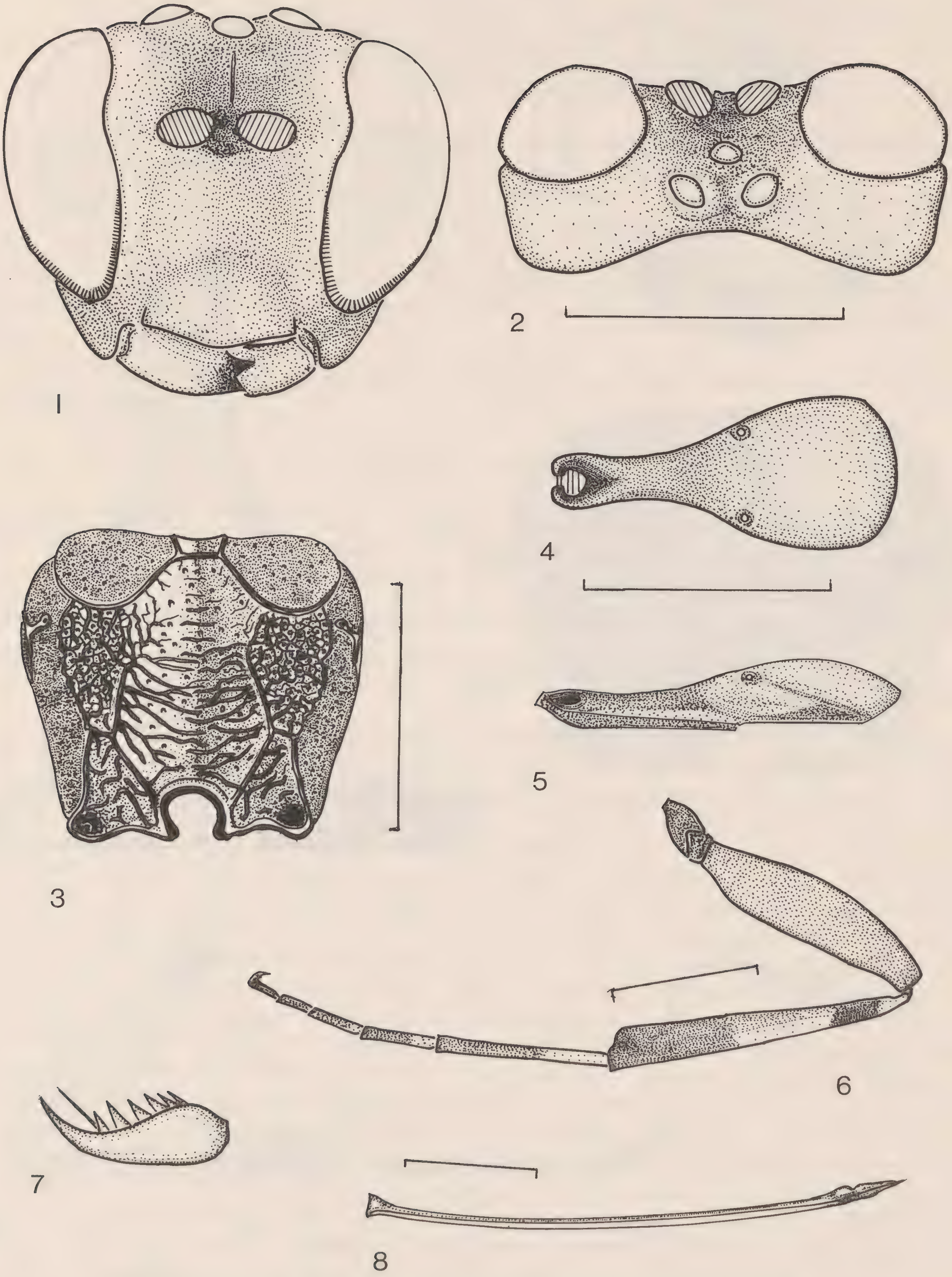
Pielou, E. C. 1979. Biogeography. John Wiley & Sons, New York, Chichester, Brisbane, Toronto. 351 pp.

Sanborne, M. 1981. A revision of the genus *Sesioplex* (Hymenoptera: Ichneumonidae) of North America. Can. Ent. 113: 623-629.

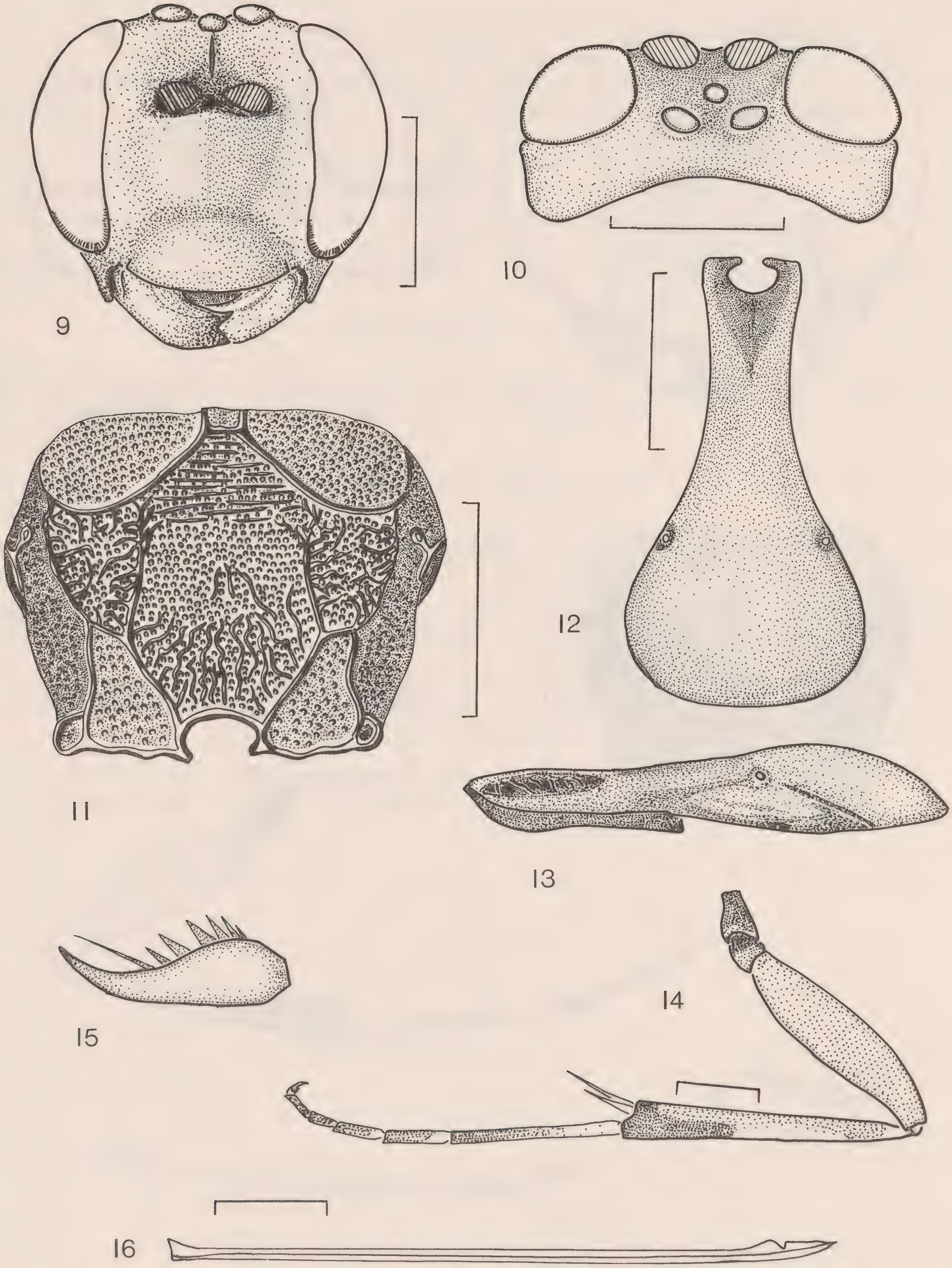
Townes, H. K. 1969. Genera of Ichneumonidae, Part 1. Mem. Am. Ent. Inst. 11. Ann Arbor, Michigan. 300 pp.

Viereck, H. L. 1912. Contribution to our knowledge of bees and ichenumon-flies, including the descriptions of twenty-one new genera and fifty-seven new species of ichneumon-flies. Proc. U.S. Natl. Mus. 42: 644.

Wiley, E. O. 1981. Phylogenetics. The theory and practice of phylogenetic systematics. Wiley-Interscience. New York. 439 pp.



Figs. 1–8. **Sesioplex brunipalpus,** n. sp.: 1, Frontal view of head. 2, Dorsal view of head. 3, Propodeum. 4, Dorsal view of first abdominal tergite. 5, Lateral view of first abdominal tergite. 6, Hind tarsal claw. 7, Hind leg. 8, Ovipositor. Scale = 1.0 mm.



Figs. 9-16. **Sesioplex cribus**, n. sp. : 9, Frontal view of head. 10, Dorsal view of head. 11, Propodeum. 12, Dorsal view of first abd. tergite. 13, Lateral view of first abd. tergite. 14, Hind tarsal claw. 15, Hind leg. 16, Ovipositor. Scale = 1.0 mm.